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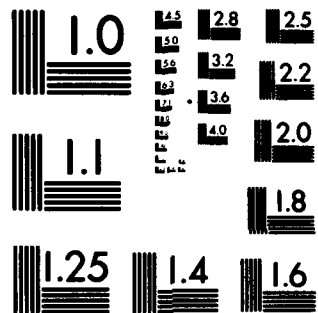
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PERSON X SITUATION RESEARCH STRATEGIES FOR  
ASSESSING ETHNOCULTURAL FACTORS IN SOCIAL COMPETENCE

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ABSTRACT

Person x situation research strategies were used for assessing ethnocultural factors in social competence. Videotape vignettes depicting the responses of different Hawaiian ethnic groups to simulated problematic life situations were viewed by judges of similar and different ethnicity. Judge's perceptions of the internal states of the stimulus persons and of their response competence in problematic situations were obtained. Main effects due to situation and interaction effects for ethnicity of stimulus person and situation were found in a large number of competence judgments for different stimulus persons. Pattern differences for stimulus persons were detectable for situational content, situational difficulty, and scale items in the different categories of competence judgment. There were no significant differences for ethnicity of the judge in assessments of competence. These results are discussed in light of assumptions about ethnic similarity-dissimilarity in judgments of the internal states and the social competence of others.

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## INTRODUCTION

Theoretical models of interpersonal competence typically fail to consider ethnocultural factors in assessing the ability to effectively interact with others (Dinges & Duffy, 1979). Moreover, such models are strongly bound to traits conceptions of competence in which the competent person is portrayed as one who possesses a set of core characteristics which explain effectiveness in interacting with persons from different cultural or ethnic backgrounds (e.g., Smith, 1963). This view ignores situational variables which may have an important role in determining response effectiveness. Some models imply situational variability in considerations of competence, such as the behavior analytic approach of Guthrie (1975) and the transcultural model of Heath (1977). Heath, in particular, recognizes the importance of situational factors but does not establish a methodology for the study of situations, nor is empirical evidence provided which examines the situational dimension of intercultural or interethnic competence.

There are available methods for improving the understanding of interethnic competence which have been developed in attempts to assess other human competencies (e.g., Goldfried & D'Zurilla, 1969; French, Rogers, & Cobb, 1974; Lazarus, Averill, & Opton, 1974). These concepts and methods have been largely ignored by studies of interethnic competence. Their application answers many of the criticisms (e.g., most prominently the neglect of situational variables) of previous research in the area. It is possible to combine these models with person X situation research methodologies and begin to gain some control over the stimulus situation in which competence is assessed.

A behavior analytic model of competence is provided by Goldfried and D'Zurilla (1969), which views the competent person as one who is capable of effective responses to problematic situations. Problematic situations are those which, because of novelty or conflicting demands, present circumstances that involve a failure or inadequacy of previously successful responses and thus require problem-solving. Effective responses are viewed as a total reaction to the situation and include complex overt behavioral patterns as well as covert thoughts and plans for future action. The advantage of this approach is that the emphasis is on individuals (as opposed to hypothetical personality traits), situations, and the specific person X situation interactions. The predictive efficiency and empirical validity of measures of interethnic competence are enhanced by the increasing correspondence between the situations and criterion behaviors for effectively responding to those situations. Criterion analysis thus takes the form of assessment of specific person X situation interactions.

The goal of this study was to partially overcome the inadequacies of past assessment methodologies as identified here and in recent reviews (e.g., Sundberg, 1978) by focusing on the measurement of competence within problematic situations which might be considered adequate tests for criterion analysis following the general approach of Goldfried and D'Zurilla (1969). The approach was also designed to incorporate recent theoretical and methodological developments in person X situation research strategies for use in studying interethnic competence (e.g., Endler & Magnusson, 1976; Magnusson & Endler, 1977).

This report is divided into three sections discussing different phases of the research aimed at developing problematic situations and measuring competencies within these situations. The first phase involved formulation of problematic situations with the goal of controlling for stimulus factors of

of difficulty and content. The dimensions of difficulty and content are considered to be important elements of situation elicitation potential, which must be measured before response analysis for interethnic competence can be done. The second phase consisted of an analysis of actual responses to the problematic situations. The third phase involved refinements of this analysis with increased control over stimulus situations and judge factors.

#### DEVELOPMENT AND ANALYSIS OF STIMULUS SITUATIONS

Prior to the assessment of response competence, it was necessary to select a set of situations with differential elicitation potential. The selection of these situations focused on the content and difficulty of the situations. Content was chosen that would be somewhat familiar to the subjects, insuring that at least minimal response would be made. Difficulty was varied by devising situations which contained interpersonally anxiety arousing events. The situation elicitation potential was assessed in order to insure that a wide range of responses was produced for subsequent judgments by other observers.

#### METHOD

##### Subjects

Ss were 8 undergraduate students 18-24 years of age and long-time residents of Hawaii (all of their lives spent in Hawaii with no major extended absence from the State). They were informed that they were to serve as subjects for making videotaped situations that would be seen by other subjects. Each gender of four ethnic groups (Chinese, Filipino, Japanese, and Caucasian) were used. All Ss were paid for their participation.

##### Study Setting and Equipment

Two adjacent offices were used for videotaping. E1's office contained a Sony Solid State Videorecorder (AV3650) and a Sony Transistor Monitor (CVM-115), which which to observe and regulate equipment being used in the Ss office. The videotaping equipment contained a Sony Solid State Videorecorder (AV 3650) and a Sony camera mounted on a tripod facing a table and a chair 8 feet away.

##### Situational Stimuli

Four content categories were used to provide a range of situations. Two versions of each category were formulated for the purpose of varying the difficulty level of the situation. The four content categories and difficulty levels are described below.

##### Category I (family)

Level 1: You and your parents are having a mild disagreement.

Level 2: You and your parents are having an intense argument.

##### Category II (job)

Level 1: You have just had your work hours shortened so that a person from another ethnic group could be hired.

Level 2: You have just been fired so that a person from another ethnic group could be hired.

##### Category III (illness)

Level 1: You've just been told that your friend is mildly ill.

Level 2: You've just been told that your friend is seriously ill.

##### Category IV (school)

Level 1: You've just gotten your grades and have flunked a course.

Level 2: You've just gotten your grades and have flunked out of school.



### Videotaping Procedures

Each subject was videotaped individually. The entire videotaping session was recorded, including induction trials and the preparatory phase of formulating a response to the situation. Ss were escorted to the videotaping office by E2 and seated at a small desk facing the camera. Ss were informed that they would be videotaping themselves responding to eight different situations that would be presented to them in written form. Prior to videotaping of the test situations, Ss were trained in the general response format with two induction trials. Induction situations were used which consisted of similar problem solving content as the eight test situations. Ss were instructed to respond to three major questions in each situation in order to insure a general similarity of response content for the situations:

- 1) What are you thinking about the situation?
- 2) What are you feeling in the situation?
- 3) What will you do about the situation?

Emphasis was placed on responding to the situations as if they were actually experiencing them. When subjects were familiar with the procedure, E2 presented the remaining eight situations to the S and left the room. Ss then continued the videotaping in the following sequence: 1) read the situation to themselves and prepare a response, 2) read the situation out loud, 3) respond, and 4) complete the rating scales. This sequence occurred eight times for each subject. Total time for each subject was approximately 75 minutes. The order of presentation of the situations was randomized for each subject. This resulted in a total of 64 stimulus situations varying in content, difficulty level, sex, and ethnicity.

### Situation Scales

Ss were required to fill out two scales after they had responded to each of the eight situations. The first scale was S-R Inventory of Anxiousness (Endler, Hunt, & Rosenstein, 1962). The S-R Inventory consists of Likert-type items and is designed to represent positive as well as negative excitement in the subject's perception of physiological responses. The second scale was composed of 24 items selected from the Differential Emotional Scale (DES) developed by Izard (1972). The items selected represent the three highest loading adjectives for each of eight-factor analytically derived dimensions of the scale. These items were randomly ordered and presented in a five-point Likert type response format.

## RESULTS

### S-R Inventory of Anxiousness

An Ethnicity X Situation X Difficulty X Question ANOVA was computed for responses to the S-R Inventory. There were significant main effects for the Questions ( $F = 13.15, p .001$ ) and Difficulty Level ( $F = 9.79, p .05$ ). No other main effects were significant. There were significant interaction effects for Difficulty Level X Question ( $F = 2.61, p .001$ ) and for Situation X Difficulty Level X Question ( $F = 1.56, p .05$ ). No other interactions were significant.

### DES

An Ethnicity X Situation X Difficulty Level X Questions ANOVA was computed for factored scores of the DES. Main effects for Situation ( $F = 10.07, p .001$ ) Difficulty Level ( $F = 11.12, p .05$ ), and Questions ( $F = 15.93, p .001$ ) were found. No other significant main effects were found. There were

significant interaction effects for Situation X Ethnicity, Situation X Difficulty Level, Difficulty Level X Questions, and Situation X Difficulty Level X Questions.

Inspection of the mean differences for the Situation main effect indicated that the DES ratings for School and Job situations were equally high with lower ratings for the Illness situation and the lowest ratings for the Family situation. Inspection of the pattern of cell mean differences for the Ethnicity X Situation effect indicated that Filipino Ss gave higher ratings on the job situation than the other ethnicities. The Family and Illness situations were rated approximately equal for all ethnic groups. For the school situation, Filipino Ss gave the lowest ratings with other ethnicities rating that situation higher.

#### DISCUSSION

The results for both the S-R Inventory and the DES indicated that the situational content and degree of difficulty were successfully controlled in the construction of behavioral stimuli for use in response competence analysis. As indicated by scale responses, the socially stressful situational content, its formulation for presentation in simulated life situations, and qualifiers designed to change the experienced level of difficulty were all successfully varied.

The results for the S-R inventory indicated variation in difficulty level but not situational content, which suggests that the situation elicitation potential measured by this scale is more sensitive to magnitude of stress within similar content categories as opposed to variation across content of situations. The complex interaction between content, difficulty level and

S-R questions indicated that situational content relates to emotional response patterns in a way that is meaningful in terms of the saliency of current life experiences of the SPs.

By contrast, the DES results indicated clear differences between different situational contents. Since the life circumstances of the SPs in this sample involved school and work to a great extent, the pattern of mean differences would seem to reflect a concern for those situations, as opposed to the relatively low ratings for the illness and family situations. The situation X ethnicity interaction pattern of mean differences was of particular interest for understanding emotional dynamics among different ethnic groups in varied life situations. The generally similar pattern of emotion ratings for the family and illness situations suggested that they may be experienced similarly by the ethnic groups in this sample. However, the pattern of higher ratings for the Filipino as opposed to the other ethnicities in the job situation and the reversal of this pattern on the school situation may be interpreted as a demonstration of the realities of the contemporary social conditions in Hawaii. Relative to their proportion of the general ethnic population in Hawaii, the Filipinos are underrepresented in higher education enrollments. Conversely, the Filipinos have been quite assertive in protesting job discrimination and demanding equal employment opportunities. This may reflect a differential emphasis on jobs over higher education among Filipinos, but replication with larger samples would be needed for confirmation.

The method used yields interpretable differences as a function of situational content and difficulty level. The results also show that scales derived from larger samples can be used in an analysis of person-ethnicity-situation dynamics.

The second phase of this study involved the use of the stimulus materials just described. Two major objectives of this phase were to: 1) measure the competence of the responses of the Stimulus Persons (SPs) in the situations, and 2) to measure the ability of persons from the same or from different ethnic groups to accurately judge the subjective experience of the SPs. It is a general assumption that individuals from different ethnic backgrounds possess different standards for evaluating response competence in a given situation. This assumption has been made for the strategy of using individuals from a targeted ethnic group to train others to work with people from that group. Heath (1977) has argued that certain dimensions of competence transcend different ethnocultural socialization based on empirical evidence from analyses of Western cultures. The current study used Heath's model in developing measures of competence and applied it to an extended range of ethnic groups within the context of situational variability.

It has also been assumed that individuals from a given ethnic group are more sensitive to the subjective experience of others of similar ethnicity. This belief is linked to the theory that common socialization experiences within a given culture are critical in recognizing the subjective states of others from observable cues. There has been virtually no prior empirical research to verify this assumption and the present research therefore contributes directly to this issue.

#### METHODS

##### Subjects

Subjects were 64 undergraduate students 18-24 years of age and local residents of Hawaii with the same general background as the SPs. They were

recruited for study participation through class announcements, posters, and word-of-mouth communications. They were informed that they were to serve as SPs in judging videotapes that would take about one hour of their time. The 64 SPs were selected from four ethnic groups (Chinese,  $n = 16$ ; Japanese,  $n = 16$ ; Filipino,  $n = 16$ ; and Caucasian,  $n = 16$ ) of which there were eight males and eight females in each ethnic group. All SPs were paid for their participation.

##### Study Setting and Equipment

The viewing environment was a 14' x 14' office containing a Sony Solid State Videocorder (AV 3650) and a Sony Transistor Monitor (CVM15). It was furnished in typical office fashion containing bookshelves, chairs, and work table.

##### Stimulus Situations

The 64 videotaped situations described previously were used as viewing stimuli. The SPs responses to the situations were edited so that only the response to the situation was viewed. Each judge viewed each ethnicity and gender SP responding to one of the situations. The situations were randomly ordered so that the judge viewed each of the eight SPs in one of the possible eight situations. Table 1 presents a summary of the various combinations of ethnicity and sex of judge, ethnicity and sex of SP, and the content and difficulty level of the situations.

##### Videotape Judging Procedures

Except for three instances in which two judges viewed the tapes together, each judge viewed the tapes individually. Judges were given a general orientation indicating that their task involved viewing and judging different persons talking about life situations to which they had been asked to respond. Judges

were then presented with a set of scales (See Table 2) to be used in judging the SPs responses. Explanation was given for the serial ordering and different instruction formats of the scales and the requirements of the judgment task. The judge viewed eight situations on one of eight possible tapes showing all SPs in each, so that all 64 situations were judged.

#### Videotape Judging Scales

The scales used for judging the stimulus person's responses to life situations were derived from the literature on interpersonal competence which is probably best summarized by Heath (See Chapters 1 & 2 in Heath, 1977). Table 2 presents the instructions and response format for competence ratings in the Thought, Feelings and Overall Response categories. Additional scale items were included to measure (1) components of person and situation contributions to judge's ratings, (2) the judge's confidence in the ratings, (3) the judge's perceived similarity to the stimulus persons, and (4) the perspective from which the judgements were made.

#### RESULTS FOR COMPETENCE ANALYSIS

The design used for this study yields a substantial amount of empirical data. Only those results which are most pertinent to the role of situational factors in competence assessment will be presented here.

#### Main Effects for Ethnicity of Stimulus Person and Interaction Effects for Ethnicity of Stimulus Person X Life Situation

A 4 (Ethnicity of Stimulus Person) by 8 (Life Situations) factorial analysis of variance with repeated measures was computed for competence ratings in the Thoughts, Feelings, and Overall Response categories. Table 3 summarizes the results for this analysis.

Table 1  
Sex and Ethnicity of Judge, Sex and Ethnicity of Stimulus Person and Content and Difficulty Level of Life Situations

ETHNICITY AND SEX OF JUDGE		ETHNICITY AND SEX OF STIMULUS PERSON															
		JAPANESE (N = 16)				CHINESE (N = 16)				FILIPINO (N = 16)				CAUCASIAN (N = 16)			
		Japanese (N=2)				Chinese (N=2)				Filipino (N=2)				Caucasian (N=2)			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
MALE n=8	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A	1A 2A 3A 4A
FEMALE n=8	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B	1B 2B 3B 4B

SITUATIONS: 1A = Shortened hours on job.  
1B = Fired from job.  
2A = Mild disagreement with parents.  
2B = Intense argument with parents.  
3A = Hearing of friend's serious illness.  
3B = Hearing of friend's mild illness.  
4A = Flunked a course in school.  
4B = Flunking out of school.

**The person in the situation was:**

Interesting 7 6 5 4 3 2 1 Oul!

	7	6	5	4	3	2	1	
Biased								Fair
Organized								Disorganized
Inconsistent								Consistent
Realistic								Unrealistic
Not disrupted by feelings								Disrupted by feelings

**THE PERSON'S FEELINGS IN THE SITUATION WERE:**

**THE PERSON'S OVERALL RESPONSE IN THE SITUATION WAS:**

	7	6	5	4	3	2	1	
showed they learned something useful for future situations								
Did not show they learned some-thing useful for future situations								

Good	7	6	5	4	3	2	1	Bad
Did not anticipate the consequences of their response	7	6	5	4	3	2	1	Anticipated the consequences of their response

Table 3

THE PERSON'S THOUGHTS IN THE SITUATION		Ethnicity of Stimulus Person		Ethnicity of Situation Person X Situation	
Biased	Fair	**		***	
Organized	Disorganized	***		***	
Inconsistent	Consistent	N.S.		*	
Realistic	Unrealistic	*		N.S.	
Not disrupted by feelings	Disrupted by feelings	***		*	
Considered all sides of the situation	Did not consider all sides of the situation	***		*	
THE PERSON'S FEELINGS IN THE SITUATION					
Strong	Weak	***		***	
Unjustified	Justified	***		*	
Complete	Incomplete	***		*	
Not obvious	Obvious	*		*	
Positive	Negative	***		**	
Expressed with difficulty	Expressed with ease	***		***	
Feelings were displayed over a range	Feelings were displayed over a narrow range	***		N.S.	

Table 3 (Continued)

Summary of Analysis of Variance for Ethnicity of Stimulus Person and Ethnicity of Stimulus Person X Situation

THE PERSON'S OVERALL RESPONSE IN THE SITUATION

Ethnicity of Stimulus Person	Ethnicity of Stimulus Person X Situation
N.S.	Immediate effective
N.S.	Non-creative
N.S.	Did not show they valued others
N.S.	Not effective in the long run
N.S.	Did not show they learned something useful for future situations
N.S.	Did not take a problem solving approach
N.S.	Good
N.S.	Bad
N.S.	Did not show they anticipated the consequences of their response
N.S.	

\* = .01  
\*\* = .05  
\*\*\* = .001  
\*\*\*\* = .005  
N.S. = Not Significant

Thoughts. There were significant main effects ( $df = 3, 168$  for all analyses) at the .05 probability level or greater for all competence ratings with the exception of the Inconsistent-Consistent scale.

There were significant interactions between Ethnicity of Stimulus Person and Life Situation at the .05 probability level or greater for all competence ratings with the exception of the Realistic-Unrealistic Scale.

Feelings. There were significant main effects at the .05 or greater probability level for all competence ratings.

There were significant interactions at the .05 probability level or greater for all competence ratings with the exception Feelings Displayed over Wide Range-Feelings not Displayed over Wide Range scale.

Overall Response. There were significant main effects at the .05 or greater probability level for all items with the exception of Immediately Effective-Not Immediately Effective scale.

There were significant interaction effects at the .05 or greater probability level for Showed They Valued Others-Did Not Show They Valued Others, Effective in the Long Run-Not Effective in the Long Run, and Good-Bad scales.

#### Main Effects for Ethnicity of Judge, Life Situations and Interaction Effects for Ethnicity of Judge X Life Situation

A 4 (Ethnicity of Judge) by 8 (Life Situations) factorial analysis of variance was done for competence ratings in the Thoughts, Feelings and Overall Response categories for each stimulus person across life situations. Table 4 summarizes the overall results for main effects and interactions.

#### Main Effects for Ethnicity of Judge

Thoughts. There were significant main effects ( $df = 3, 32$  for all analyses) at the .05 probability level or greater for Disrupted by Feelings-Not

Analysis of Variance for Significant Effects of Ethnicity of Judge, Situations  
and Situation by Ethnicity of Judge Interaction for Stimulus Persons

THE PERSON'S THOUGHTS IN THE SITUATION									
Japanese					Filipino				
Female		Male			Female		Male		
E	S	E	S	EXS	E	S	E	S	EXS
Biased	N.S. ****	N.S. *	N.S.	N.S.	Biased	N.S. ****	N.S. *	N.S.	N.S.
Fair	N.S. ****	N.S. *	N.S.	N.S.	Fair	N.S. ****	N.S. *	N.S.	N.S.
Disorganized	N.S. ****	N.S. *	N.S.	N.S.	Disorganized	N.S. ****	N.S. *	N.S.	N.S.
Inconsistent	N.S. *	N.S.	N.S. N.S. N.S.	N.S.	Inconsistent	N.S. *	N.S.	N.S. N.S. N.S.	N.S.
Realistic	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Realistic	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Not disrupted	Disrupted by	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Not disrupted	Disrupted by	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Considered all	Did not consider	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Considered all	Did not consider	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
sides of the	sides of the	N.S. *	N.S.	N.S.	sides of the	sides of the	N.S. *	N.S.	N.S.
situation	situation	N.S. *	N.S.	N.S.	situation	situation	N.S. *	N.S.	N.S.
THE PERSON'S FEELINGS IN THE SITUATION									
Strong	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Strong	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Weak	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Weak	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Justified	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Justified	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Complete	N.S. **	N.S.	N.S. N.S. N.S.	N.S.	Complete	N.S. **	N.S.	N.S. N.S. N.S.	N.S.
Not obvious	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Not obvious	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Positive	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Positive	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Expressed with	Expressed with	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Expressed with	Expressed with	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
difficulty	ease	N.S. ****	N.S.	N.S.	difficulty	ease	N.S. ****	N.S.	N.S.
Feelings were	Feelings were	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Feelings were	Feelings were	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
a wide range	a wide range	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	a wide range	a wide range	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.

Table 4 (Continued)  
Analysis of Variance for Significant Effects of Ethnicity of Judge, Situations  
and Situation by Ethnicity of Judge Interaction for Stimulus Persons

THE PERSON'S THOUGHTS IN THE SITUATION									
Chinese					Caucasian				
Female		Male			Female		Male		
E	S	E	S	EXS	E	S	E	S	EXS
Biased	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Biased	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Fair	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Fair	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Disorganized	N.S. **	N.S.	N.S. N.S. N.S.	N.S.	Disorganized	N.S. *	N.S.	N.S. N.S. N.S.	N.S.
Inconsistent	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Inconsistent	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Realistic	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Realistic	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Not disrupted	Disrupted by	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Not disrupted	Disrupted by	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Considered all	Did not consider	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Considered all	Did not consider	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
sides of the	sides of the	N.S. ****	N.S.	N.S.	sides of the	sides of the	N.S. ****	N.S.	N.S.
situation	situation	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	situation	situation	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
THE PERSON'S FEELINGS IN THE SITUATION									
Strong	N.S. **	N.S.	N.S. N.S. N.S.	N.S.	Strong	N.S. **	N.S.	N.S. N.S. N.S.	N.S.
Weak	N.S. **	N.S.	N.S. N.S. N.S.	N.S.	Weak	N.S. **	N.S.	N.S. N.S. N.S.	N.S.
Justified	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Justified	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Complete	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Complete	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Not obvious	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Not obvious	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Positive	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Positive	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
Expressed with	Expressed with	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Expressed with	Expressed with	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
difficulty	ease	N.S. **	N.S.	N.S.	difficulty	ease	N.S. **	N.S.	N.S.
Feelings were	Feelings were	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	Feelings were	Feelings were	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.
a wide range	a wide range	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.	a wide range	a wide range	N.S. N.S. N.S.	N.S. N.S. N.S.	N.S.

Analysis of Variance for Significant Effects of Ethnicity of Judge, Situations  
and Situation by Ethnicity of Judge Interaction for Stimulus Persons

THE PERSON'S OVERALL RESPONSE IN THE SITUATION											
Chinese				Caucasian				Filipino			
Female		Male		Female		Male		Female		Male	
S	E	S	E	S	E	S	E	S	E	S	E
EXS = Situation X Ethnicity of Judge											
* = .05    ** = .01    *** = .005    **** = .001    N.S. = Not Significant											
Not immediately effective	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Non-creative	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they valued others	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Not effective	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Effective in the long run	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they learned something useful	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not take a problem solving approach	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Good	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Bad	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they anticipated the consequences of their response	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.

Analysis of Variance for Significant Effects of Ethnicity of Judge, Situations  
and Situation by Ethnicity of Judge Interaction for Stimulus Persons

THE PERSON'S OVERALL RESPONSE IN THE SITUATION											
Japanese				Filipino				Filipino			
Female		Male		Female		Male		Female		Male	
S	E	S	E	S	E	S	E	S	E	S	E
EXS = Situation X Ethnicity of Judge											
* = .05    ** = .01    *** = .005    **** = .001    N.S. = Not Significant											
Not immediately effective	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Non-creative	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they valued others	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Not effective	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Effective in the long run	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they learned something useful	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not take a problem solving approach	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Good	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Bad	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.
Did not show they anticipated the consequences of their response	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.	N.S. * N.S.



Disrupted by Feelings, for the Caucasian female and the Caucasian male; for Anticipated Consequences of Response-Did Not Anticipate Consequences of Response for the Caucasian female; and for Fair-Biased and Consistent-Inconsistent for the Filipino female.

Feelings. There were significant main effects at the .05 probability level for Justified-Unjustified for the Chinese male and the Japanese female and for Displayed Over Wide Range-Not Displayed Over Wide Range for the Japanese female.

Overall Response. There were significant main effects at the .05 probability level or greater for both Creative-Non Creative, and Immediately Effective-Not Immediately Effective for the Chinese female and the Caucasian female and for Showed Useful Learning for Future-Did Not Show Useful Learning for Future for the Caucasian female.

#### Main Effects for Life Situations

Thoughts. There were significant main effects for situation at the .05 or greater probability level for Fair-Biased for Caucasian male and female and Japanese male and female; for Organized-Disorganized for the Chinese female, the Caucasian male and female, the Japanese male and female, and the Filipino male; for Inconsistent-Consistent for the Japanese female; for Realistic-Unrealistic for the Chinese female, and Caucasian male and female; Disrupted by Feelings-Not Disrupted by Feelings for the Chinese female, Caucasian male and female, and the Filipino female; and for Considered All Sides-Did not Consider All Sides for the Chinese male and female, Caucasian male and female, Japanese female and the Filipino male and female.

Feelings. There were significant main effects for situation at the .05 or greater probability level for Strong-Weak for the Chinese female, Caucasian

male and female, and the Filipino female; for Justified-Unjustified for the Chinese female, the Caucasian male and female, and the Filipino male; for Complete-Incomplete for the Caucasian male, the Chinese female, the Caucasian male, and the Filipino male; for Positive-Negative for the Chinese male and female, and the Caucasian male; for Expressed with Difficulty-Expressed with Ease for all stimulus persons and for Feelings Displayed over Wide Range-Not Displayed Over Wide Range for the Caucasian male and female.

#### Overall Response

There were significant main effects for situation at the .05 probability level or greater for Immediately Effective-Not Immediately Effective for the Caucasian male and female, the Japanese male, and the Filipino male; for Creative-Non Creative for the Chinese female, the Caucasian male, the Japanese male, and the Filipino male; for Showed They Valued Others-Did Not Show They Valued Others for the Chinese male and female, the Caucasian female, the Japanese male and female, and the Filipino male and female; for Effective in the Long Run-Not Effective in the Long Run for the Chinese female, the Caucasian female, and the Japanese female; for Showed Useful Learning for Future-Did Not Show Useful Learning for Future for the Chinese male and the Japanese male; Took a Problem Solving Approach-Did not Take a Problem Solving Approach for the Chinese female, the Caucasian male and female, and the Japanese female; and for Anticipated the Consequences of Their Response-Did Not Anticipate the Consequences of Their Response for the Japanese male and female.

#### DISCUSSION

Main effects due to ethnicity of judge and interaction effects for ethnicity of judge and situation both occurred at approximately chance levels

of probability. Main effects due to situation and interaction effects for ethnicity of stimulus person and situation were found in a large number of competence judgments for different stimulus persons. Pattern differences for stimulus persons are detectable for situational content, situational difficulty level and scale items in the different categories of competence judgment.

Situational effects were related to the amount of variation in judgments of competence for stimulus persons. These effects were relatively consistent across the Thoughts, Feelings and Overall Response categories for each stimulus person and for stimulus persons within an ethnic group. The Caucasian stimulus persons were the most variable with close to 70% of their judged responses showing variation due to situation for both the male and female. The Chinese and the Japanese stimulus persons were less variable with approximately 40% of competence judgments related to situations and the female of each group more variable in competence ratings. The Filipino stimulus persons were perceived as only slightly less variable (approximately 35% of competence judgments) than the Japanese or Chinese with the male showing more variability than the female. These results give clear indication that the stimulus persons were perceived as responding differently to different life situations as judged by the competence criteria used in this study.

The results for mean difference patterns indicates that there is an idiosyncratic character to the situational influence on competence judgments for different stimulus persons. This makes systematic comparisons between stimulus persons difficult, if the perceived response competence to the life situations used in this study is as variable as the results suggest. This outcome also highlights the significant variation in competence judgments by situations, reflecting the dynamic pattern of interaction that occurs between persons and life situations. If the life situations used in this study are

taken to be a meaningful sample of situations in the social ecology of stimulus persons who share a similar social environment, then the results provide additional evidence for the examination of patterns of stability and change across situations, which has been indicated as a primary goal of person X situation research strategies (e.g., Pervin, 1977).

There were also differences in the consistency with which certain competence criteria varied due to situation effects. In the Thoughts category the items Organized-Disorganized and Considered All Sides-Did Not Consider All Sides varied due to situational effects for 6 of 8 stimulus persons. The competence criteria of Biased-Fair and Disrupted by Feelings-Not Disrupted by Feelings were related to situational effects for half the stimulus persons.

In the Feelings category the criterion of Expressed With Difficulty-Expressed With Ease was consistently variable for situations for all stimulus persons. The criteria of Strong-Weak and Justified-Unjustified also showed considerable variation due to situation in half of the stimulus persons.

In the Overall Response category the competence criteria with the most variation due to situational effects was the Showed They Valued Others--Did Not Show They Valued Others which varied for 7 of 8 stimulus persons (excepting the Chinese male). Immediately Effective-Not Immediately Effective, Creative-Non Creative, and Good-Bad all varied due to situation for half of the stimulus persons. These competence items in the Thoughts, Feelings, and Overall Response categories may comprise a cluster of discriminative items which are more sensitive to situation effects.

Since prior studies using person X situation research strategies have not included ethnocultural factors, the results for ethnicity of stimulus persons provides data for a seriously neglected aspect of this type of research. In the Thoughts category the order of competence judgments was typically for the

Japanese to be judged as more competent followed by the Filipino, Caucasian and Chinese stimulus persons. In the *Feelings* category the Filipino stimulus persons were typically judged more competent followed by the Japanese, Caucasian, and Chinese stimulus persons. The major exception in this category was for items dealing with the range and degree of emotional expressiveness. For these items the Caucasian stimulus persons were judged more competent followed by the Japanese, Filipino and Chinese stimulus persons. In the *Overall Response* category the competence ratings were more variable. The Japanese and Filipino stimulus persons were typically judged more competent followed by Caucasian and Chinese stimulus persons.

It is important to note that these differences in judged competence refer to the order of judgments and not to degree of differences between the ethnicity of stimulus persons. The Japanese, Filipino and Caucasian stimulus persons tended to form one cluster with small mean differences between their judged competence of responses. The Chinese stimulus persons were different from these three groups in the mean competence judgments indicating that they were perceived as less competent than the other three ethnic groups. The range of differences in judgments occurs primarily within the more competent range of the competence-incompetence continuum, which is not unexpected considering that the stimulus persons were all selected from a normally functioning population.

The large number of significant interactions between ethnicity of stimulus persons and situations is consistent with the situational variation in competence judgments. The pattern of mean differences for these interactions is very complicated and beyond the scope of the present discussion. It is difficult to find a systematic pattern of mean differences for ethnic group by situation interactions that is interpretable by reference to the presumed life

style or common socialization patterns of the groups in this study. This suggests that there may be an idiosyncratic character to the competence criteria with which ethnically different stimulus persons are judged by ethnically similar and dissimilar observers of their responses. The type of life situations that were used as stimuli in this study may be similar in elicitation potential and therefore non-discriminating in terms of cross-ethnic differences. An important question arises regarding the type of life situations which would vary sufficiently in elicitation potential to produce different responses based on ethnic group membership.

The pattern of mean differences indicated that the Chinese stimulus persons were perceived as differentially competent by contrast with the Japanese, Filipino and Caucasian stimulus persons. This leads to a question regarding the amount of variation that is validly attributable to ethnic group membership. The more conservative conclusion would be that the perceived variation in response competence is due to individual differences in selection within an ethnic group rather than a systematic difference between Chinese stimulus persons and other stimulus persons. However, if ethnic group membership is not related to response competence judgments, whereas individual differences in stimulus persons are, one must question the use of "representative" ethnic stimulus persons in human relations, race relations, and inter-ethnically oriented mental health training programs. One must also question the standard format and content of training programs which do not relate values, attitudes and behaviors to variation in response to life situations, which would appear to have considerable face validity for differences in their elicitation potential.

The non-significant results for ethnicity of judge are interesting in light of the presumed differences in the perception of the appropriate

thoughts, feelings and overall response that different ethnic groups express when faced with stressful life situations. Results presented above clearly indicate that the stimulus persons were seen as variable across situations and competence criteria, thus the not unreasonable conclusions that they were responding differently in different situations. That the ethnicity of the judge was not related to these judgments may indicate that the competence criteria used were not specific enough to produce discriminative judgments based on the ethnicity of judges. It may also be that there are no real differences in the criteria used by ethnically different judges for assessing the competence of ethnically similar and dissimilar person's responses to life situations. While the responses of ethnically different stimulus persons may vary considerably based on life situation, judges of their responses may use essentially the same criteria for assessing their thoughts, feelings, and overall responses, irrespective of the ethnic group membership of judge or a stimulus person. However, the type of situations and the difficulty of the life situations confronting the person may show a more direct relationship to variation in competence judgments.

The situations in the present study were selected from the more stressful end of a spectrum of possible life situations. Under these situational conditions a common core of competence criteria may be used in assessing responses. Different competence criteria may be used for judging responses to other life situations which would reflect differences in the ethnic group membership of the observers. Consequently, in stressful life situations ethnic differences in response competence may be minimal, while they may be much more pronounced in less stressful life situations.

This study used a small sample of the possible life situations in which people may interact. However, it would not require a larger sample of

situations to demonstrate that competence judgments differ depending upon the situation in which a person is observed. In light of the evidence that has been provided for the importance of situations in assessing competence, it appears that those models which suggest the need to consider situational factors in judging competence have gained some empirical support.

Guthrie (1975) and Heath (1977) both recognized that the competent individual would be required to adjust behavior according to the situational demands, and their views have been supported by this study. Conversely, those models which suggest that competence involves a cluster of cross-situationally constant traits, attributes, or characteristics are placed in question by the results. If the stimulus persons in this study were imbued with specific traits which were relatively stable across situations, then the situational variability should not have been such a significant factor so often.

The central issue is not whether there is a set of traits which can be subsumed under the category of competence; one would certainly not argue that situations are so variable that there is no hope of determining a common set of criteria for judging competence. Rather, the point is that there is a need to systematically identify those situations which elicit differences in the effectiveness with which individuals from different ethnic backgrounds respond. The present study suggests that there are behavioral criteria which can be operationally described and objectively assessed with respect to varying degrees of competence in different life situations. The main goal now is to find the critical releaser situations in which ethnic differences are expressed and the adaptive effectiveness of persons from different ethnic backgrounds can be assessed. As Edward Hall (1977) states:

An almost overwhelming task lies ahead to classify situational frames and the way in which they build up into larger wholes. Man

has had very little experience with this sort of analysis and I for one have no notion where it will lead us (p. 140).

Hopefully, one direction that such an analysis may lead is to a better understanding of how persons of different ethnic backgrounds can interact effectively with different life situations and with one another.

#### RESULTS OF DISCREPANCY ANALYSIS

Discrepancy scores for both the S-R Inventory and the DES were calculated by subtracting the self-rating of the SP from the judge's rating of that person in the situation. An Ethnicity of Judge X Situation ANOVA was performed on each item of the S-R Inventory and on the factor scores of the DES for each stimulus person. There were few significant effects for Ethnicity of Judge or for the interaction of Ethnicity of Judge X Situation. There were a number of significant effects as a function of the situation, but these effects were not consistent across the stimulus persons involved. The Caucasian male stimulus person elicited significant effects for situation for the vast majority of analyses performed, while the Chinese male stimulus person elicited only four significant effects for situation. In general, Caucasian and Filipino stimulus persons elicited situation effects more than Chinese or Japanese stimulus persons.

#### DISCUSSION

The findings are consistent with the previous analysis of competence items in that only the situational factors attain statistical significance. The measures used assessed the accuracy of the judges in rating the subjective

experience of the stimulus persons from similar and dissimilar ethnic backgrounds. To the extent that there is a significant effect for situation, the judges are variable in the accuracy of rating the subjective state of the stimulus person across the situations in which that person is viewed. The parallel with findings from the competence analysis holds, with the Caucasian stimulus persons being the most variable across situations and Japanese and Chinese stimulus persons showing low variability across situations. One interpretation of these findings is that the ethnicity of stimulus persons relates to varying degrees of consistency across situations. Thus, the Caucasian stimulus persons displayed a wide range of feelings as opposed to the Chinese, but both groups were judged as being consistent across situations in their typical response pattern. The net effect is to cause more variability in the accuracy of ratings of the Caucasians. An alternative explanation would be that all stimulus persons varied across situations, but the judges were less capable of judging the Caucasian stimulus persons consistently across all situations. The major implication is that the ability to accurately assess the subjective experiences of another varies as a function of their ethnic membership and as a function of the situation to which that other person is responding.

The absence of a significant effect for ethnicity of judge also runs counter to the assumption that a person of a particular ethnic group is more sensitive to members of that group than to members of a different ethnic group. Moreover, there were no specific situations in which this sensitivity was more or less likely to occur since there were no systematic, significant effects for interactions between ethnicity of judge and situations. It would therefore seem that ethnicity per se does not qualify a person to judge more accurately the subjective experience of others of the same ethnicity.

## JAPANESE-CAUCASIAN SUB-STUDY

The range of ethnic groups used in the above study may have distorted differences in judgments as a function of the ethnicity of the judge, since each judge was required to view eight different stimulus persons from four different ethnic groups. Distinctions between ethnic groups may have become confused and the length of the judging session may have produced fatigue effects which attenuated differences in judgments. In addition to the effect of four ethnic groups of stimulus persons, the use of four ethnic groups of judges increased degrees of freedom for ethnicity of judge effects. This may have reduced the mean square term for that factor without a corresponding increase in the variance for that factor. To overcome these difficulties, Japanese and Caucasian ethnic groups were selected for a sub-study focusing on only two ethnicities. There is a fairly extensive background on differences between the interaction styles of these two groups (e.g., Barnlund, 1975). There are also large numbers of both groups in Hawaii. This provides an accessible sample and a greater likelihood of interpersonal familiarity due to longstanding interactions between members of these two ethnic groups.

There was also an interest in studying a special sample of persons who have experienced the socializing influences of both Caucasian and Japanese parents from infancy. Such a sample is available in the form of persons who are offspring of mixed marriages of Japanese and Caucasians, called "Hapa-Maole" in Hawaii. It was hypothesized that these persons would be more sensitive to both Caucasian and Japanese others. They have had early exposure to both ethnicities and would presumably be more familiar with interaction styles and emotional expression in both groups. Therefore, in addition to asking Caucasian and Japanese individuals to judge Japanese and Caucasian

stimulus persons, a third group of mixed ethnic or "Hapa-Maole" judges was included in this study.

## METHODS

Subjects

Ss were 48 undergraduate students 18-24 years of age and local residents of Hawaii. They were recruited for participation in the study through class announcements, posters and word-of-mouth communications. They were informed that they were to serve as Ss in judging videotapes that would take about a half an hour of their time. The 48 Ss were selected from three groups (Japanese,  $n = 16$ ; Caucasian,  $n = 16$ ; Mixed,  $n = 16$ ). There were eight males and eight females in each group. All Ss were paid for their participation.

Study Setting, Equipment, Videotapes Stimulus Situations, and Procedures

The setting, equipment, and procedures were the same as described in the above Methods sections. The videotape stimulus situations were also the same as used previously except that the tapes used included only stimulus persons of Japanese or Caucasian ethnicity. The Ss viewed one of four possible tapes randomly ordered to show the stimulus persons in all situations. Each Ss judged a tape showing at least one of the situation content categories and all possible sex-ethnic group combinations (Japanese male, Caucasian male, Japanese female, Caucasian female).

Videotape Judging Scales

The scales used for judging the stimulus person's subjective reactions and their responses to life situations were identical to those described above.

# RESULTS FOR JAPANESE-CAUCASIAN SUB-STUDY

## Discrepancy Analysis

Discrepancy scores were calculated for S-R Inventory items and for DES factors by subtracting judges' ratings of stimulus persons (SP) from the self-ratings of the stimulus persons. ANOVA was performed on the discrepancy scores for Sex of SP x Ethnicity of SP x Situation. Results are summarized in Table 5. For the S-R Inventory, the main effect for Situation was significant at the .05 level or higher for all items except Enjoy the Challenge, Get Full Feeling in Stomach, and Seek experiences like this. The main effect for the Ethnicity of SP was significant for the items: Heart Beats Faster, Get an Uneasy Feeling, Feel Exhilarated, Enjoy the Challenge, Mouth Gets Dry, Seek Experiences Like This, and Experience Nausea. In addition, there were significant Situation x Ethnicity of SP interactions for all the S-R Inventory items except Need to Urinate, Get Full Feeling in Stomach, Have Loose Bowels, and Find the Situation Difficult to Handle.

For the DES scale, the main effect of Ethnicity of SP was significant for the factors Anger and Surprise. The main effect of Situation was significant for the factors: Enjoyment, Fatigue, Anger, Surprise, and Distress. There were also Situation x Ethnicity of SP interaction effects for the factors Fatigue, Anger, and Surprise.

Additional ANOVA was performed on discrepancy scores for Sex of Judge x Ethnicity of Judge x Situation. Results are summarized in Table 5. For the S-R Inventory items and the DES factors, there were very few significant main effects for Ethnicity of Judge or for the interaction of that factor with Situations. The main effect for Situations was significant for all S-R Inventory items except Enjoy the Challenge, Get a Full Feeling in Stomach

Summary of Analysis of Variance of Discrepancy Scores  
For Japanese-Caucasian Sub-Study

TABLE 5

S-R Inventory of Anxiousness	Ethnicity of Judge	Stimulus Person	Ethnicity of Situation	Situation X Ethnicity of Judge		Situation X Ethnicity of Stimulus Person		Ethnicity of Judge X Ethnicity of Stimulus Person	
				N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Heart beats faster	...	...	...	...	...	...	...	...	...
Get an uneasy feeling	N.S.	N.S.	...	...	...	...	...	...	...
Emotions disrupt action	N.S.	N.S.	...	...	...	...	...	...	...
Feel exhilarated and thrilled	N.S.	N.S.	...	...	...	...	...	...	...
Want to avoid situation	N.S.	N.S.	...	...	...	...	...	...	...
Perceive	N.S.	N.S.	...	...	...	...	...	...	...
Need to urinate frequently	N.S.	N.S.	...	...	...	...	...	...	...
Enjoy the challenge	N.S.	N.S.	...	...	...	...	...	...	...
Mouth gets dry	N.S.	N.S.	...	...	...	...	...	...	...
Become immobilized	N.S.	N.S.	...	...	...	...	...	...	...
Get full feeling in stomach	...	N.S.	...	...	...	...	...	...	...
Seek experiences like this	N.S.	N.S.	...	...	...	...	...	...	...
Have loose bowels	N.S.	N.S.	...	...	...	...	...	...	...
Experience nausea	N.S.	N.S.	...	...	...	...	...	...	...
Find it difficult to handle	N.S.	N.S.	...	...	...	...	...	...	...





TABLE 6  
Summary of Analysis of Variance of Competence Across Life Situations  
For Japanese-Caucasian Sub-Study

The PERSON'S FEELINGS IN THE SITUATION					The PERSON'S FEELINGS IN THE SITUATION				
Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person
Organized	Disorganized	Organized	Disorganized	Organized	Disorganized	Organized	Disorganized	Organized	Disorganized
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Unpleasant	Pleasant	Unpleasant	Pleasant	Unpleasant	Pleasant	Unpleasant	Pleasant	Unpleasant	Pleasant
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Realistic	Unrealistic	Realistic	Unrealistic	Realistic	Unrealistic	Realistic	Unrealistic	Realistic	Unrealistic
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Not disrupted by feelings	Disrupted by feelings	Not disrupted by feelings	Disrupted by feelings	Not disrupted by feelings	Disrupted by feelings	Not disrupted by feelings	Disrupted by feelings	Not disrupted by feelings	Disrupted by feelings
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Considered all sides of the situation	Did not consider all sides of the situation	Considered all sides of the situation	Did not consider all sides of the situation	Considered all sides of the situation	Did not consider all sides of the situation	Considered all sides of the situation	Did not consider all sides of the situation	Considered all sides of the situation	Did not consider all sides of the situation
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Unjustified	Justified	Unjustified	Justified	Unjustified	Justified	Unjustified	Justified	Unjustified	Justified
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Complete	Incomplete	Complete	Incomplete	Complete	Incomplete	Complete	Incomplete	Complete	Incomplete
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Not obvious	Obvious	Not obvious	Obvious	Not obvious	Obvious	Not obvious	Obvious	Not obvious	Obvious
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Expressed with difficulty	Expressed with ease	Expressed with difficulty	Expressed with ease	Expressed with difficulty	Expressed with ease	Expressed with difficulty	Expressed with ease	Expressed with difficulty	Expressed with ease
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Feelings were displayed over a wide range	Feelings were displayed over a narrow range	Feelings were displayed over a wide range	Feelings were displayed over a narrow range	Feelings were displayed over a wide range	Feelings were displayed over a narrow range	Feelings were displayed over a wide range	Feelings were displayed over a narrow range	Feelings were displayed over a wide range	Feelings were displayed over a narrow range
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

TABLE 6 (continued)

Summary of Analysis of Variance of Competence Across Life Situations  
For Japanese-Caucasian Sub-Study

The PERSON'S OVERALL RESPONSE IN THE SITUATION					The PERSON'S OVERALL RESPONSE IN THE SITUATION				
Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person	Situational Ethnicity of Judge	Situational Ethnicity of Stimulus Person
Immediately effective	Not immediately effective	Immediately effective	Not immediately effective	Immediately effective	Not immediately effective	Immediately effective	Not immediately effective	Immediately effective	Not immediately effective
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Non-creative	Creative	Non-creative	Creative	Non-creative	Creative	Non-creative	Creative	Non-creative	Creative
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Showed they valued others	Did not show they valued others	Showed they valued others	Did not show they valued others	Showed they valued others	Did not show they valued others	Showed they valued others	Did not show they valued others	Showed they valued others	Did not show they valued others
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Not effective in the long run	Effective in the long run	Not effective in the long run	Effective in the long run	Not effective in the long run	Effective in the long run	Not effective in the long run	Effective in the long run	Not effective in the long run	Effective in the long run
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Showed they learned something useful for future situations	Did not show they learned something useful for future situations	Showed they learned something useful for future situations	Did not show they learned something useful for future situations	Showed they learned something useful for future situations	Did not show they learned something useful for future situations	Showed they learned something useful for future situations	Did not show they learned something useful for future situations	Showed they learned something useful for future situations	Did not show they learned something useful for future situations
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Did not take a problem-solving approach	Took a problem-solving approach	Did not take a problem-solving approach	Took a problem-solving approach	Did not take a problem-solving approach	Took a problem-solving approach	Did not take a problem-solving approach	Took a problem-solving approach	Did not take a problem-solving approach	Took a problem-solving approach
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Good	Bad	Good	Bad	Good	Bad	Good	Bad	Good	Bad
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Showed they anticipated the consequences of their responses	Did not show they anticipated the consequences of their responses	Showed they anticipated the consequences of their responses	Did not show they anticipated the consequences of their responses	Showed they anticipated the consequences of their responses	Did not show they anticipated the consequences of their responses	Showed they anticipated the consequences of their responses	Did not show they anticipated the consequences of their responses	Showed they anticipated the consequences of their responses	Did not show they anticipated the consequences of their responses
N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

N.S. = Not Significant  
\* =  $p \leq .05$   
\*\* =  $p \leq .01$   
\*\*\* =  $p \leq .005$   
\*\*\*\* =  $p \leq .001$

Ethnicity of SP for the items: Biased, Organized, Consistent, Thoughts Disrupted by Feelings, Feelings Positive, Feelings Expressed with Difficulty, Showed They Valued Others, Showed They Learned Something Useful, Good, and Anticipated the Consequences of Their Response. There were significant main effects for Situations for the items: Thoughts Organized, Thoughts Disrupted by Feelings, Feelings Strong, Feelings Expressed with Difficulty, Immediately Effective, Creative, Showed They Valued Others, and Showed They Learned Something Useful). There were also significant interaction effects between Situation and Ethnicity of SP for the items: Thoughts Organized, Thoughts Disrupted by Feelings, Feelings Obvious, Feelings Positive, and Feelings Expressed with Difficulty.

An additional ANOVA was performed for the effects of Sex of Judge x Ethnicity of Judge x Situation. Results are presented in Table 6. There were no significant effects for the Ethnicity of the Judge and no significant interaction effects for Ethnicity of Judge x Situation. A third ANOVA was performed for effects due to the interaction between SP and Judge. The only significant interaction found between Ethnicity of SP and Ethnicity of Judge was for the item Immediately Effective.

Examination of means across situations for competence items for which situation was a significant effect shows no consistent pattern. The situation which elicits the highest or lowest rating varies, depending upon the item. For most items, there is a generally high variance across situations which is not related to any particular situation eliciting high or low ratings. An examination of the means for Ethnicity of SP effects show that Japanese SPs were rated more Biased, Organized, Consistent, Realistic, Positive, Learned Something Useful, Good, and Showing more Value for Others than Caucasian SPs, but is less Disrupted by Feelings, Did not Consider all Sides,

and Expresses Feelings with Difficulty than Caucasian SPs. Examination of interaction means for significant effects of Ethnicity of Judge x Ethnicity of SP indicated that the major difference was for the item Immediately Effective. Japanese judges rated the Japanese SPs response as more Immediately Effective than the Caucasian SP, while the reverse was true for both Hapa-Maole and Caucasian judges.

#### DISCUSSION

The use of a more limited selection of ethnic group stimulus persons and ethnic judges yields essentially similar results as those reported in previous sections. Differences were found for the discrepancy measures and competence ratings across ethnicity of stimulus persons and across situations, but there were no significant effects for the ethnicity of the judges.

The situational effect followed a similar pattern with no clear-cut conclusions to be drawn regarding the relative competence of different stimulus persons within specific situations. This would be expected within a normal range of competence where individuals would be expected to vary their response to meet the demands of the situation and would thus be evaluated differently by those called upon to judge those responses.

Across all judges, Japanese stimulus persons were rated as being more competent in that they were seen as more organized, consistent, realistic, good, positive, showing value for others, learning something useful, free from the disruptive influence of feelings upon thoughts, at ease in expressing their feelings, in anticipating the consequences of their actions, and considerate of all sides. In the earlier study described above, the Japanese stimulus persons were judged approximately equal in response competence to

the Caucasian stimulus persons. The task of judging only two ethnic groups as opposed to four may have allowed judges to make finer distinctions about response competence, since the stimulus situations were identical in both studies. A question remains whether or not Japanese are actually more competent in similar real life situations. Since the competence criteria were adapted from the model developed by Heath (1977), there is some validity in suggesting that cross-culturally basic components of competence are being assessed by that model.

Although only two ethnic groups of stimulus persons were used, no differences were found for the three different categories of judges. The replication of this finding lends further strength to the earlier interpretation that judges of different ethnic backgrounds use similar criteria in evaluating response competence. Moreover, Hapa-Hao'e judges did not differ from either Japanese or Caucasian judges on most judgments of response competence or the subjective experience of stimulus persons. This indicates that the socialization experiences of persons raised in mixed-ethnic social environments do not differentially affect these types of judgments.

# REFERENCES

- Barnlund, B. Public and private self in Japan and the United States. Tokyo: The Service Press, 1975.
- Dinges, N. & Duffy, L. Culture and Competence. In: Marsella, I., Ciborowski, T. & Thorp R. (eds.) Current Perspectives on Cross-Cultural Psychology. New York: Academic Press, 1979, pp. 209-232.
- Endler, N.S. & Magnusson, D. Interactional psychology and personality. New York: John Wiley and Sons, 1976.
- French, J.R.P., Rodgers, M., & Cobb, S. Adjustment as person-environment fit. In G.V. Coelho, D.A. Hamburg, & J.E. Adams (eds.) Coping and Adaptation. New York: Basic Books, 1974, pp. 316-333.
- Goldfried, M.R. & D'Zurilla, T.J. A behavioral-analytic model for assessing competence. In C. Spielberger (ed.) Current topics in clinical and community psychology. New York: Academic Press, 1969, I, pp. 151-186.
- Guthrie, G.M. A behavioral analysis of culture learning. In: Richard W. Brislin (ed.) Cross-cultural Perspectives On Learning. New York: Halsted Press, 1975. pp. 95-116.
- Hall, E.T. Beyond culture. New York: Anchor Books, 1977.
- Heath, D. Maturity and Competence: A Transcultural View. New York: Gardner Press, 1977.
- Lazarus, R.S., Averil, J.R. & Opton, E.M. The psychology of coping: Issues of research and assessment. In G.V. Coelho, D.A. Hamburg, & J.E. Adams (eds.) Coping and adaptation.
- Magnusson, D. & Endler, N.S. Personality at the Cross-roads: Current issues in interactional psychology. New York: John Wiley & Sons, 1977.
- Pervin, L.A. The representative design of person-situation research. In: David Magnusson and Norman S. Endler (eds.) Personality at the Crossroads. New York: John Wiley & Sons, 1977, pp. 371-384.
- Smith, M.B. Competence and socialization. In: John A. Clausen (ed.) Socialization and Society. Bonton: Little, Brown and Company, 1968, pp. 270-320.
- Sundberg, M., Snowden, L. & Reynolds, W. Toward assessment of personal competence and incompetence in life situations. Annual Review of Psychology, 1978, 29, pp. 179-221.

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